Data Used in the Clean Water Action Plan Unified Watershed Assessment

Name of Data Layer: Soil Erodibility

Definition (General Description): This parameter is developed based on an area's slope, soil erodibility factor, distance to nearest stream and landuse type.

Data Source: Natural Soil Groups of MD, Office of Planning (OP) 1994 Land Use/Land Cover Data

Data Type: Condition _**X**_ Stressor ___ Vulnerability ___ Trend ___ Growth ___ Other ___

Method of Calculation: Four ArcView datalayers were created and overlaid to develop a soil erodibility value for the 8-digit watersheds in MD. These datalayers included the soil erodibility factor (K), the slope steepness, a stream layer with a 1000' buffer and land areas identified as cropland. The soil erodibility factors were assigned to the Natural Soil Group using *Table 1. Estimated Physical and Chemical Properties* in *Natural Soil Groups of MD* Technical Series Report December 1973. Slope was also assigned using the Natural Soils Group properties. The stream datalayer with the 1000' buffer was created using MD streams datalayer and using XTOOLS in ArcView to create a 1000' buffer. The cropland layer was created using MD OP land use cover. The composite value of these layers was normalized and the values were classified into 5 groups using the natural breaks method in ArcView. The classifications high and very high for soil erodibility (corresponding to a numeric value between 0.275 - 0.314 and 0.314 - 0.370, respectively) were used to assign a watershed to the Category 1 rating for this indicator.

Watershed Scale: Tributary Strategy Region ___ USGS 8 Digit ___ MD 6 Digit ___ MD 8 Digit _**X**_ MD 12 Digit ___ Adaptable to Any Scale ___ Other ___

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Clean Water Goal: Yes ___ No _**X**_

Other Natural Resource Goal: Yes _**X**_ No ___
If Yes: Benchmark Goal ___ Relative Goal _**X**_
Description of Goal: _____

Assumptions: _____

Comments: This datalayer was created in the early spring of 1998. At the time it was not considered to be needed for use by the state. During the CWAP process, however, it was decided that a soil erodibility index would be a good indicator to include under Category 1 indicators. Due to time constraints, proper QA/QC has not been performed on this datalayer.

Soil Erodibility - continued

References: MD Dept State Planning. 1973. Natural Soils Groups of Maryland.